

NIKOLAYEV, A.V.; SINITSYN, N.M.; SHUBINA, S.M.

Donor-acceptor concepts in their application to extraction. Zhur.
strukt. khim. 1 no.3:319-323 8-0 '60. (MIRA 14:1)

1. Institut neorganicheskoy khimii Sibirsogo otdeleniya AN SSSR.
(Extraction (Chemistry))

21.3200

-44
S/186/60/002/001/001/022
A057/A129

AUTHORS: Nikolayev, A.V.; Shubina, S.M.; Sinitsyn, N.M.

TITLE: Extraction of the sum of radioactive isotopes with butyl phosphinic esters

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 3 - 5

TEXT: The present paper is a part of the research program on extraction characteristics of butyl phosphoric derivatives. The extraction of the sum of radioactive isotopes with two butyl phosphinic esters, namely $(C_4H_9O)_2(C_4H_9)PO$ and $(C_4H_9O)(C_4H_9)_2PO$ was studied. Extractability of rare elements and rare earth elements is important for the extraction technique of uranium and plutonium fission products. L.L. Burger [Ref. 1: J. Phys. Chem., 62, 5, 590 (1958)] observed already the dependence of extractability of uranium and plutonium on the nature of alkyl-phosphoric compounds used as extraction solvent. Investigations concerning the extraction of rare and rare earth elements were made only with tri-butyl phosphate [investigation of the American authors: I. Warf; D.F. Peppard; B. Waever et al; J.M. Fletcher et al; and the Soviet authors: A.V. Nikolayev et al, ZhNKh, 3, 1, 160 (1958)], or dialkyl-phosphoric acids [C.A. Blake, Report no. X

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22452

S/186/60/002/001/001/022
A057/A129

Extraction of the sum of radioactive isotopes....

1,550 of the 2nd conference on the peaceful use of atomic energy (Geneva)]. There are no publications in the literature on extraction properties of alkyl phosphinates for rare and rare earth elements. Extractions in the present experiments were carried out in separating funnels using a ratio aqueous : organic phase = 1 : 1 with 1 N HNO₃ solutions, and solutions of the investigated esters in high-boiling saturated hydrocarbons. The solutions contained: 6% Ru¹⁰⁶, 46% rare earths, 7% Zr⁹⁵, 2% Cs¹³⁷, 15% Sr⁹⁰. The distribution coefficient K_p was determined by activity measurements (using a scintillation counter) calculating K_p = specific gamma activity in the organic phase / specific gamma activity in aqueous phase. There was no great difference in K_p between extractions using (C₄H₉O)₂(C₄H₉)PO and tributylphosphate (see Table), but a considerable increase in K_p using (C₄H₉O)(C₄H₉)₂PO. This effect depends on the concentration of the extractant in the saturated hydrocarbon (Fig. 1). The decrease of the number of ester groups in the molecule increases the distribution coefficient, which agrees with the previous statement of the present authors [Ref. 13: DAN SSSR, 127, 1, 117 (1959); Ref. 14: DAN SSSR, 127, 3, 578 (1959)]. Thus the basic reaction between extractant and extractable substance seems to occur even in such a complex mixture like the sum of radioactive isotopes over the phosphorylic oxygen. There are: 1 figure, 1 table and 14 references: 4 Soviet and 10 American.

Card 2/4

S/830/62/000/002/001/002
D214/D308

AUTHORS: Nikolayev, A.V., Sinitsyn, N.M. and Shubina, S.M.

TITLE: Acceptor-donor concepts as applied to extraction

SOURCE: Ekstraktsiya; teoriya, primeneniye, apparatura, no. 2, Ed. by A.P.Zefirov and M.M. Senyavin. Moscow, Gosatomizdat, 1962, 63 - 70

TEXT: The influence of various groups present in an extracting agent on the extraction ability of the agent was studied. In the series of extracting agents $(C_4H_9O)_{3-n}(C_4H_9)_nPO$ (where n = 0, 1, 2, 3) the P-oxygen was found to be active and responsible for the formation of the complex $UO_2(NO_3)_2 \cdot 2A$ (where A = extracting agent) by donation of electrons to $(UO_2)^{2+}$. As the value of n rises the electron density on the P-oxygen increases

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S/830/62/000/002/001/002

Acceptor-donor concepts ... D214/D308

and hence the extraction power of the agent increases. This was verified on U^{VI} , Th^{IV} , Pu^{IV} and Pu^{VI} . The introduction of an electronegative radical into the molecule of the agent will reduce the extraction power while the presence of highly branched chains will prevent the formation of the complex by steric hindrance. Similar arguments apply to the $\text{R}_{3-n}\text{P}(\text{OR}')_n$ type of extracting agent. An extracting agent must, therefore, be sufficiently polar to permit the formation of the complex but the polarity must not be such that the agent becomes water-soluble or that the resulting complex becomes insoluble in nonpolar solvents. It now remains to determine the permissible polarity limits. There are 2 figures and 4 tables.

Card 2/2

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Reciprocal effect of atoms and groups in complex nitroso
compounds of rhutenum. Dokl.AN SSSR 145 no.1:109-111 J1 '62.
(MIRA 15:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR. Predstavлено академиком I.I.Chernyayevym.
(Rhutenum compounds) (Nitroso compounds)

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Bond strength of the nitroso group in ruthenium compounds. Zhur.
neorg. khim. 8 no.8:1988-1989 Ag '63. (MIRA 16:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.
(Ruthenium compounds) (Nitroso group)

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Effect of outer-space cations on the stability of ligand bonds
in complex compounds. Zhur. neorg. khim. 8 no.10:2329-2333) '63.
(MIRA 16:10)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
AN SSSR.

(Complex compounds) (Chemical bonds)

ZVYAGINTSEV, O. Ye.; SINITSYN, N. M.;

"On mutual influence of atoms and groups in complexes of nitrosyl ruthenium."

report submitted for 8th Intl Conf on Coordination Chemistry, Vienna, 7-11 Sep 64.

PICHKOV, V.N.; SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Nitrosoruthenium compound [RuNO(NO₂)₂ (NH₃) OH]. Dokl. AN
SSSR 156 no. 4:891-893 Je '64. (MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii im. N.S.
Kurnakova AN SSSR. Predstavлено akademikom I.I.Chernyayevym.

ZVYAGINTSEV, O.Ye.; SINTSYN, N.M.; PICHKOV, V.N.

Extraction of $\text{Na}_2[\text{RuNO}(\text{NO}_2)_4\text{OH}] \cdot 2\text{H}_2\text{O}$ by means of aliphatic amines.
Radiokhimiia 6 no. 5:619-621 '64. (MIRA 18:1)

SINITSYNA, S.M.; SINITSYN, N.M.

Effect of the nature of neutral ligands on certain properties
of uranyl complex compounds. Zhur.neorg.khim. 10 no.4:923-926
(MIRA 18:6)
Ap '65.

L 22241-66 EWP(j)/EWT(m)/EWP(t) IJP(c) RM/JD/JG

ACCESSION NR: AP6005423 (A) SOURCE CODE: UR/0289/65/000/003/0087/0093

35
33
8

AUTHOR: Sinitayn, N. M.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov, AN SSSR,
Moscow (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Investigation of the sorption of ruthenium by natural sorbents

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk,
no. 3, 1965, 87-93

TOPIC TAGS: ruthenium, sorption, fission product, chemical absorption, absorption coefficient, clay, sand, radioisotope

ABSTRACT: The author studied the effect of the chemical state of radioruthenium in solution on its sorption by various natural sorbents. The procedure and the equipment used in the experiments are described. Data presented show that the percentage of sorption of radioruthenium depends primarily on the properties of the sorbent. Irrespective of the chemical form of radioruthenium in solution, the lowest sorption coefficient is shown by sand and clay, and the highest by peat and silt containing a maximum amount of humus and exchange calcium. The chemical state of ruthenium in solution has a considerable effect on the percentage of sorption.
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UDC: 541.15 546.96

L 22241-66

ACCESSION NR: AP6005423

2

Irrespective of the nature of the sorbent, the highest sorption coefficient is shown by radioruthenium in solution in the form of nitroso nitrate complexes, and the lowest by the nitrosonitro-, nitrosochloro-, and chlorocomplexes of ruthenium. The effect of hydrolysis of compounds in solution on the percentage of sorption is noted. The percentage of sorption also depends, to a considerable degree, on the time of contact of the sorbent with the ruthenium solution. An increase in the pH solution from 2 to 9 for clay as well as for soil causes an increase of the percentage of sorption. It is concluded that the behavior of radioruthenium during sorption by natural sorbents is extremely complicated, unique, and is fundamentally different from that of other long-lived fission products. The characteristic of the coordination chemistry of ruthenium and the chemical forms of finding it in solutions substantially affect the sorption of radioruthenium by natural sorbents. Author expresses gratitude to E. Ya. Rovinskii for consultations and assistance in this work. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 009 / CTH REF: 011

Card 2/2 nst

Gilliland, Carl; Kurnakova, N.S.; Pechatnik, V.V.

Extraction of complex ruthenium nitrocospentahalides with aliphatic
amines. Dokl. Akad. Nauk SSSR 160 no.2:370-372 Ja '65.

(MUR 12:2)

I. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
AM SSSR. Submitted July 8, 1964.

L 00034-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM
ACCESSION NR: AP5020302 UR/0186/65/007/004/0394/04C0
541.103.5:546.9

AUTHOR: Sinitsyn, N. M.; Rovinskiy, F. Ya.

TITLE: Adsorption of ruthenium by natural adsorbents. Adsorption of nitrosonitro-, nitrosochloro-, and chloro-complexes of ruthenium-106. 1 33

SOURCE: Radiokhimiya, v. 7, no. 4, 1965, 394-400 D

TOPIC TAGS: ruthenium compounds, adsorption, complex compound 27

ABSTRACT: The purpose of this investigation was to determine the effect of the chemical state of radioactive ruthenium in solutions on its adsorption by various natural adsorbents. The effect of the nature of the adsorbent on the adsorption of ruthenium was investigated. Adsorption of nitrosonitrate complexes of ruthenium increases in the following order: sand < clay < soil (chernozem) < peat < sludge. The effect of the chemical nature of radioactive ruthenium compounds is shown in Fig. 2 (Enclosure 01). Regardless of the nature of the adsorbent, nitrosonitrate complexes are adsorbed better than nitrosochloro or chloro complexes. On the basis of adsorption curves it was established that in almost all cases radioactive ruthenium is adsorbed better from solutions containing it in the form of hydrolyzed

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L 00034-66

ACCESSION NR: AP5020302

complexes. It was found that the percent of adsorption is significantly related to the length of time of contact of adsorbent with radioactive ruthenium solution. The nature of the adsorbent and the chemical state of the radioactive ruthenium in solution markedly changes the time of maximum adsorption on the adsorption curves. Change of the pH of the solution from 2 to 11 leads to increase of the adsorption of radioactive ruthenium in the form of nitrosochloro- and chloro complexes. Nitrosonitrate complexes are adsorbed most intensely at about pH=9. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09Dec64

ENCL: 01

SUB CODE: GC, NP

NO REF Sov: 010

OTHER: 010

Card 2/3

L 00034-66
ACCESSION NR: AP5020302

ENCLOSURE: 01

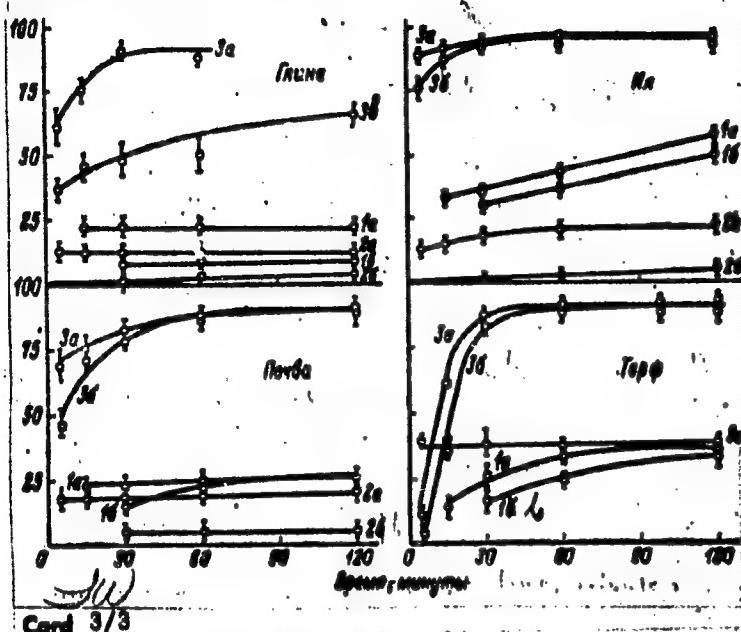


Fig. 1. The effect of the chemical structure of ruthenium-106 in solution on its adsorption by natural adsorbents (at pH=2).

Nitroconitate complexes:
1a-- hydrolyzed; 1b-- not hydrolyzed. Nitrochloro complexes: 2a-- hydrolyzed; 2b-- not hydrolyzed. Chloro complexes: 3a-- hydrolyzed;
3b-- not hydrolyzed

L 8084-66 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM

ACC NR: AP5027210

SOURCE CODE: UR/0078/65/010/011/2571/2573

AUTHOR: Sinitsyn, N. M.; Zvyagintsev, O. Ye.

ORG: None

TITLE: The thermal stability of complex compounds of ruthenium containing an NO group

SOURCE: Zhurnal neorganicheskii khimii, v. 10, no. 11, 1965, 2571-2573

TOPIC TAGS: ruthenium compound, thermal stability, nitrogen compound

ABSTRACT: A thermographic study was made of a series of nitroso compounds of ruthenium in a vertical pyrometer with simultaneous automatic recording of the change in weight during heating in air. Temperature measurements were made with a platinum-platinum rhodium thermocouple with a diameter of 0.3 mm. A table shows the formulas of the nitroso ruthenium compounds, the temperature of the start of the endothermic effect, and the temperatures of the initial and maximum exothermic effects. For all the compounds, the dissociation of the RuNO

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UDC: 546.96:541.49+546.172-31

L 8084-66

ACC NR: AP5027210

groups is accompanied by a strong exothermic effect; in most cases, this is preceded by an endothermic effect, which goes over suddenly to the exothermic effect. The first endothermic effect at 300 C reflects the elimination of two molecules of NH₄Cl (calculated weight loss 31.10%, found experimentally 32.00%). For all compounds investigated, the final dissociation product was ruthenium dioxide. The final products of thermal dissociation were analyzed for ruthenium content, which varied from 74.8 to 76.7%; no nitrogen or chlorine was found. To confirm the conclusion that the RuNO group exists up to the temperature of the following endothermic effect, the products obtained by heating the salts to a point somewhat lower than this temperature (by 20-30C) were analyzed for nitrogen. Nitrogen was found in all the products. The data indicates that the dissociation temperature of the RuNO group varies over a wide interval, from 220 to 410 C.

Orig. art. has: 1 figure and 1 table

SUB CODE: GC, IC / SUBM DATE: 07Jan65 / ORIG REF: 003 / OTH REF: 003

Card

2/2 (JW)

L 1778-66 EWT(m)/EPF(n)-2/EWP(j)/T/EWP(t)/EWP(b) IJP(c) ES/JD/WW/JG/RM
ACCESSION NR: AP5024003 UR/0020/65/164/002/0351/0353

AUTHOR: Sinitsyna, S. M.; Sinitsyn, N. M.

24
P

TITLE: The reaction of uranyl halides with tri-n-butylphosphine oxide

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 351-353

TOPIC TAGS: extraction, uranium complex, nuclear fuel

ABSTRACT: In this work a number of complexes were formed between uranyl dihalides and tri-n-butylphosphine oxide (TBPO). Freshly prepared uranium trioxide was dissolved in stoichiometric amounts of the appropriate hydrohalic acid, followed by addition of TBPO in n-heptane ($\text{U:TBPO} = 1:2$). The following complexes were obtained: $[(\text{UO}_2)_5\text{F}_{12}(\text{TBPO})_8]$, $[\text{UO}_2\text{Cl}_2(\text{TBPO})_2]$, $[\text{UO}_2\text{Br}_2(\text{TBPO})_2]$, and $[\text{UO}_2\text{I}_2(\text{TBPO})_4]$, as indicated by elemental analysis. Cryoscopic molecular-weight determinations in benzene indicate that the fluoride complex exists in benzene in the form of a hexamer, the chloride complex as a tetramer, and the bromide and iodide complexes as monomers. There is evidence for the existence of bridging halogen bonds between individual complex molecules. [VS]

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)
Card 1/1

L 1778-66

ACCESSION NR: AP5024003

SUBMITTED: 26Dec64

ENCL: 00

SUB CODE: IC,GC

NO REF SOV: 005

OTHER: 002

ATD PRESS: 4112

mcb
Card 2/2

SYVAGINTSEV, O.Ye.; SINITSYN, N.M.; PICHKOV, V.N.

Effect of the nature of the acid on the extraction of
ruthenium in the $[Ru(N_{\text{O}}(NO_2)_4 OH]^{2+}$ form. Zhur.neorg.khim.

11 no.1 198-200 Ja '66.

(MTR 19:1)

1. Submitted December 10, 1964.

SINITSYN, N.M.; ZVYAGINTSEV, O.Ye.

Hydrolysis of $(\text{NH}_4)_2[\text{Ru}(\text{NOCl})_5]$. Zhur.neorg.khim. 11
no.1:200-202 Ja '66. (MIRA 19:1)

1. Submitted December 14, 1964.

ACC NR: AF6015091

(A)

SOURCE CODE: UR/J020/66/168/001/010/012

AUTHOR: Sinityna, S. M.; Sinitsyn, N. M.

34

ORG: none

TITLE: Effect of the nature of acid-ligands on the formation of uranyl complexes with tri-n-butylphosphine oxide

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 110-112

TOPIC TAGS: uranium compound, melting point, refractive index

ABSTRACT: Tri-n-butylphosphine oxide (TBPO), according to the literature, is an active extracting agent in the series



where it forms a strong donor-acceptor bond with the uranyl group in complex uranyl compounds. The reactions of complex uranyl salts with TBPO were investigated by the synthesis of uranyl salts with a 20% solution of TBPO in heptane. All compounds were taken in stoichiometric amounts with the addition of H₂O (1/4 the amount of TBPO) at the end of the synthesis for a better separation of the phases. The UO₂SO₄(TPBO)₃ in the form of light yellow crystals was obtained from UO₂SO₄[CO(NH₂)₂]₃. It had a molecular weight of 937±18, a melting point of 137°C, and a decomposition temperature of 280°C. The (UO₂)₄(SO₄)₄(TBPO)₁₀ in the form of yellow crystalline powder was formed from

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UDC: 546.791.6

L 08658-67

ACC NR: AP6015091

UO₂SO₄•3H₂O and from K₂[UO₂(SO₄)₂•2H₂O]. It had refractive index numbers α 1.512, β 1.520, and γ 1.532; a molecular weight of 3220; a melting point of 130-140°C; and a decomposition temperature of 295°C. The UO₂C₂O₄(TBPO) in the form of a light yellow sediment was formed from (NH₄)₂[UO₂(C₂O₄)₂(H₂O)₂]. It had refractive index numbers α 1.535, β 1.539, and γ 1.575; and a decomposition temperature of 285°C. The following phosphine oxide compounds were synthesized from complex uranyl compounds with single-charge acid-ligands. The (UO₂)₂(CH₃COO)₄(TBPO)₃ in the form of colorless crystals was synthesized from UO₂(CH₃COO)₂•2H₂O. It had a decomposition temperature of 265°C and a molecular weight changing with time from 1160 to 875. The UO₂(ClO₄)₂(TBPO)₂ was obtained by dissolving freshly prepared UO₃ in concentrated HClO₄ and subsequent reaction of the solution with the TBPO. It had a decomposition temperature of 180°C. The UO₂(NO₃)₂(TBPO)₂ was formed from UO₂(NO₃)₂•6H₂O, UO₂(NO₃)₂[CO(NH₂)₂]₂ and from freshly prepared UO₃ dissolved in concentrated HNO₃. It had refractive index numbers α 1.546, β 1.533, and γ 1.561; a decomposition temperature of 265°C; a melting point of 74°C; and a molecular weight of 842. The UO₂(CNS)₂(TBPO)₃ was obtained from UO₂(CNS)₂(H₂O₃). It had a molecular weight of 1054 and a decomposition temperature of 325°C. It was shown that the coordination number of the UO₂⁺⁺-group in complex compounds with TBPO does not depend on the nature of the acid-ligands and that reactions of the formation of complex compounds with TBPO cannot be described by the general formula even if it occurred with uranyl salts of the same type. The paper was presented by Academician I. I. Chernyayev 28 Aug 65.

SUB CODE: 07/ SUBM DATE: 16Jun65/ ORG REF: 005/ OTH REF: 001

Card 2/2 in 1

SINITSYN, N. P.

PA 20/49T32

USSR/Electricity
Telephone - Circuits
Telephones - Apparatus

Oct 48

"Using AC to Determine the Location of Breaks in Telephone Circuits," N. P. Sinitsyn, Engr, 3 pp

"Vest Svyazi - Elektrosvyaz" No 10

Treats subject under measurement of input resistance, of attenuation disagreement, and of asymmetry. Includes two tables, and five diagrams.

20/49T32

SINTSIN, N. P.

"Homotransplantation of the Frog Heart" (p. 277) by Sintsin, N. P. (Gordi)

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XIX, No. 2, 1945.

1962 "Medicine - Library" re
"Medicine - Surgery"

FBI ...

"New Books on Surgery in 1963" 2 pp

"Vest Khirurgii" Vol LIX, No 2

Reviews 11 books, among them "Penicillin and Its Use in Medicine," by E. G. Afrikyan, "Traumatic Shock," by S. I. Banyshtis, "Combat Trauma and Its Complications," "Skin Graft in the Treatment of Inflammation of Stumps," by A. I. Oska, "Outline of the Scientific Activity of the Office of General Surgery of the Molotov Medical Institute in the Years of the Great Patriotic War," by B. V. Painr, "First Moscow Order of Lenin Medical Institute," "Traumata of the Nervous System and Their Consequences," "Sanitation Service in the Great Patriotic War," Penicillin (Its Uses in Surgical Practice)," by F. L. Sel'tsovskiy, "Transplantation of the Heart, a New Technique in Experimental Biology and Medicine," by N. F. Sinitzyn, "Activities of the Army Medical Academy Imeni S. M. Kirov," Vol 25, "Handbook on Surgical Works," "Encyclopedic Dictionary of Army Medicine," and "Penicillin in Surgery" by V. Ya. Shlapoverskiy.

PA 50/49T75

USSR/Medicine - Transplantation of
Organs
Jul 53

"Transplantation of the Heart," N. P. Sinitsyn,
Chair of Pharmacology, Gorkiy Med Inst im S. M.
Kirov

Klin Med, Vol 31, No 7, pp 5-14

Describes progress in isotransplantation of organs to
warm-blooded animals. Developed technique of pre-
serving donor hearts in nutrient medium. Recent
expts show a transplanted second heart functioning up
to 30 days in a dog's body. Expts on complete re-
placement of the heart of dogs are under way.

27OT53

Observation of the coronary action is made through a
plexiglass plate "ingrown" into the tissues over a
subdermally transplanted heart. Further expts are
scheduled for a visual observation of the effects of
various pharmacological agents on the functioning of
the cardiovascular system with a transplanted heart.

27OT53

SINITSYN, N.P., professor, doktor meditsinskikh nauk.

In vivo study of the heart under glass. Nauka i zhizn' 21 no.11:
10 N '54.
(Heart) (MLRA 7:12)

USSR/Medicine

FD-2268

Card 1/1 Pub 17-19/20

Author : Sinitsyn, N. P.

Title : Method for inserting a cannula into the thorax for visual observation of coronary circulation

Periodical : Byul. eksp. biol. i med. 3, 74-76, Mar 1955

Abstract : Describes operative procedure and method for inserting and fixing in place a cannula in the thorax of a dog for visual observation of coronary circulation. Diagram; electrocardiogram; photographs. No references.

Institution: Chair of Pharmacology (Head-Prof. N. P. Sinitsyn) of the Gor'kiy Medical Institute

Submitted : July 6, 1954 by S. V. Anichkov, Member of the Academy of Medical Sciences USSR

Sinitsyn, N.P.

User/Medicine--Heart ailments

Card 1/1 Pub. 86--25/39

Author : Sinitsyn, N. P., Prof

Title : ~~.....~~ Living heart under glass

Periodical : Priroda 44/1, 112-113, Jan 1955

Abstract : An account is given of studies made for the purpose of learning more about thrombosis of the coronary vessels of the heart. After successful substitution of transparent plastic for a part of the skull of a dog in order to watch changes in blood flow in the brain, a similar window was made in the breast for observing heart action. This also contained a device which registered changes in the size of the heart. Illustrations.

Institution : Gor'kov Medical Institute

Submitted :

SINITSYM, N.P., professor (g. Gor'kiy)

Transplantation of organs. Zdorov'e 2 no.1:19-20 Ja '56. (MLR 9:3)
(TRANSPLANTATION (PHYSIOLOGY))

COUNTRY : USSR
 CATEGORY : General Biology. Individual Development. B
 TRANSPLANTATION AND UNION.
 ABS. JOUR. : RZhBiol., No. 2, 1959, No. 5113
 AUTHOR : Sinitsyn, N. P.
 INST. :
 TITLE : The Method of Transplanting a Second Head to
 a Frog.
 ORIG. PUB. : Bull. eksperim. biol. i meditsining, 1956, 42, No. 9,
 79-80
 ABSTRACT : After removing the breastbone in the recipient
 frog, the pericardium is excised, the frenulum
 of the heart is clipped, the left arcus aortae
 cut and ligated at its ramification point and
 a cannula is inserted into the right superior
 vena cava and into the central stump of the
 aorta. In the donor frog the vessels of the
 pectoral girdle are ligated to the right and

CARD:

1/3 Chair of Pharmacology, Gor'kiy Med Inst

-26-

COUNTRY : USSR
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 1959, No.
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : left, the inferior vena cava is separated and
 is ligated at the level of the liver, the
 descending aorta arches are ligated and severed
 as high as possible to the head. The head and
 the heart of the donor are severed completely.
 Then the arterial cone is ligated and cut from
 the heart. A celluloid cannula is inserted
 into the inferior vena cava. After being ligated
 the atrial cords are cut off. The severed head
 is placed upon the breast of the recipient, the

CARD:

2/3

COUNTRY : USSR

CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No.

SINITSYN, N.P., professor

Experimental transplantation of the heart [with summary in English,
p.158] Vest. Khir. 77 no.7:28-37 Jl '56. (MLRA 9:10)
(HEART, surg. transplantation
exper., in dogs, physiol. aspects)
(TRANSPLANTATION, exper.
heart in dogs, physiol. aspects)

COUNTRY	USSR
CATEGORY	Human and Animal Physiology, Circulation
ABS. JOUR.	: EkhBiol., No. 5 1959, No. 22075
AUTHOR	:Sinitsyn, N.P.
INST.	: TITLE
CRIG. PUB.	: Patol. fiziologiya i eksperim. terapiya, 1957, No. 5, 26--35
ABSTRACT	: A review devoted to homotransplantation of the heart. According to the author's data, 8 to 15% survival has been attained in frogs following transplantation of the heart (replacement of the frog's own heart with the heart of another frog). Included are results of dynamic observations of EKG, arterial pressure, cardiac rhythm and examination of the histological structure of the muscles and nerve elements of the transplanted frog heart. In warm-blooded animals, according to the author's data, the homotransplanted heart can function from 50 to 40 minutes up to 30 days. Bibliography of 40 titles.--L.S.Nakhutin
Card:	1/1

SINITSYN, N.P.

Homotransplantation of the heart in turtle. Eksper.khir. 2
(MIHA 12:8)
no.2:16-23 Mr-Apr '57.

1. Iz Instituta fiziologii (dir. -prof.Lyudvig Nikolai) Berlin-
skogo universiteta imeni Gumbol'dta.
(HEART, transpl.
homotranspl. in turtle technic (Rus))

SINITSIN, N.P.

"Resection, restauration, reparation et regeneration des ventricules cardiaques chez le chien."

report presented at the 18th Congress of the Intl Society of Surgery, Munich, 13-20 Sep '59.

SINITSYN, N.P. (Gor'kiy, ul. Minina, d.3-a, kv.22)

Resection and plastic surgery of the cardiac ventricles in
an experiment. Report No.2. Grud. khir. 1 no.4:15-18 ~~Ag~~
'59. (MIRA 15:3)

1. Iz Gor'kovskogo meditsinskogo instituta imeni Kirova.
(HEART—SURGERY)

SINITSYN, N.P.

Experimental resection and plastic surgery of the ventricles of
the heart [with summary in English]. Ekspер.khir. 4 no.1:30-35
Ja-F '59. (MIRA 12:2)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(HEART, surg.
ventricles, resection & plastic surg. in dogs
(Rus))

SINITSYN, N.P. (Gor'kiy, ul. Minina, d.3-a, kv. 22)

New method for forming a cardiac aneurysm in a dog. Grud. khir.
2 no.6:31-33 N-D '60. (MIRA 14:1)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(ANEURYSMS) (HEART)

SINITSYN, N.P.

Resection and plastic surgery of the cardiac ventricles under experimental conditions. Report No.2: Analysis of the histogenesis of regenerating heart muscle in dogs. Eksper. khir. 5 no. 5:22-24 '60. (MIRA 14:1)

(HEAD)

SINITSYN, N.P. (Gor'kiy, ul.Mimina,d.3-a,kv.22)

Resection and plastic surgery of the cardiac ventricles in an experiment.
Report no. 38 Autoplastic operations on the heart. Grnd. khir. 3
no.1:43-47 Ja-F '61. (MIRA 16:5)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.
(HEART--SURGERY)

SINITSYN, N. P.

New method of registering the blood pressure in the ventricle of
the heart of dogs. Grud. khir. no. 5:119 '61. (MIRA 15:2)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S. M. Kirova.

(BLOOD PRESSURE) (HEART--SURGERY)

SINITSYN, N.P. (Gor'kiy, ul.Minina i Pozharskogo, 3a, kv.22)

Free transplantation of the heart muscle in dogs in an experiment.
Arkh. anat. gist. i embr. 40 no.6:41-45 Je '61. (MirA 15:2)

I. Kafedra farmakologii (zav. - zasluzhennyj deyatel' nauki N.P.
Sinitsyn) Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.
(HEART MUSCLE) (TRANSPLANTATION OF ORGANS, TISSUES, ETC.)

SINITSYN, N.P.

Homotransplantation of the heart of a tortoise. Report No.2.
Eksper. khir. i anest. 8 no.3±20-22 My-Je '63 (MIRA 17:1)

1. Iz Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova

S/0247/63/013/006/1108/1110

ACCESSION NR: AP4002550

AUTHOR: Smetankin, G. N.

TITLE: Third Volga Area Conference of physiologists, biochemists, and pharmacologists

SOURCE: Zhurnal vystashchey nervnoy deyatelnosti, v. 13, no. 6, 1963, 1108-1110

TOPIC TAGS: bionics, closed cybernetic system, neuron modeling, pharmacological stimulant, regeneration process, dibazol, thyroidine, pentoxylin, neuron, cybernetics, central nervous system, biological modeling

S
SU ABSTRACT: The Third Volga-Area Conference of physiologists, biochemists, and pharmacologists was held in Gorky in June 1963. One hundred and thirty papers were presented. Experimental results and clinical data were reported on various problems in the physiology, biochemistry, and pharmacology of the central nervous system. Problems concerning the cardiovascular system, respiration, endocrine system, and the digestive system were also discussed. A. N. Halakhov and M. Yu. Ul'yanov

Card 1/2

Card 2/

SINITSYN, N.P. (Gor'kiy, ul. Minina, d.3a, kv.22)

Experimental resection and plastic surgery on cardiac ventricles.
Report No.4: Bifurcation of cardiac ventricles along the septum.
Grud. khir. 6 no.2:53-55 Mr-Ap '64. (MIRA 18:4)

1. Gor'kovskiy meditsinskiy institut.

SINITSYN, N.V. (Leningrad, D-104, ul. Chekhova, d.11/13, kv.48)

Role of X-ray cinematography in the diagnosis of neoplastic and
non-neoplastic stomach lesions. Vop. onk. 10 no.6:20-25, '64.
(MIRA 18:3)

1. Iz rentgenologicheskogo otdeleniya (ispolnyayushchiy obyazani-
nosti zaveduyushchego otdeleniyem - doktor med. nauk A.P.Lazareva)
Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN
SSSR prof. A.I.Serebrov, nauchnyy rukovoditel' doktor med.nauk
A.G.Baranova).

SINITSYN, N.V., inzh.

Flow distribution between the water conduits of joint hydro-electric power stations. Izv. vys. ucheb. zav.; energ. 8 no.8:106-111 Ag '65. (MIRA 18:9)

1. Belorusskiy politekhnicheskiy institut. Predstavlena kafedroy gidrotekhnicheskogo stroitel'stva.

SINITSYN, O. A.

"Basic Problems of the Theory and Design of Reversing Gears with Forced Transitional Processes." Sub 5 Feb 51, All-Union Correspondence Polytechnic Inst, Ministry of Higher Education USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sur. No. 480, 9 May 55

Candidate of Technical Sciences

SINITSYN, O. A.

AID P - 1593

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 2/27

Author : Sinitsyn, O. A., Kand. of Tech. Sci., Dotsent

Title : Calculation of starting characteristics of a generator-motor system

Periodical : Elektrichestvo, 3, 5-10, Mr 1955

Abstract : The author investigates a starting arrangement with a one-step control of the generator field. Difficult computations are required to find the maximum starting current, and also to determine the starting time. The author suggests evaluating the starting process on the basis of the ratio between the starting time with shunted generator field resistance, and the ideal starting time with a constant maximum torque. This ratio is always more than a unit. The formula presented by the author to express this relationship makes it possible to bind together the forcing generator field current, the

AL'TMAN, S.Ya., kandidat tekhnicheskikh nauk, doteent; SINITSYN, O.A., kandidat tekhnicheskikh nauk, detsent; SHAYEV, E.F., inzhener.

M.M.Sokolov's book "Electric drives and power supply for industrial plants"
Reviewed by S.IA.Al'tman, O.A.Sinitsyn, E.F.Silayev. Elektrичество no.8:
95 Ag '56. (MLRA 9:10)

1.Moskovskaya vyssheya tekhnicheskaya uchilishche imeni Baumana.
(Electric meters) (Electric power)

SINITSYN, O.A., kand.tekhn.nauk, dotsent

Choice of parameters for the control windings of amplidynes
and magnetic amplifiers. Elektrichestvo no.10:70-71 O '60.
(MIRA 14:9)

(Rotating amplifiers) (Magnetic amplifiers)

SINITSYN, O.A., kand.tekhn.nauk, dotsent

"Automatic control of electric drives on continuous hot rolling mills" by IA.IU. Solodukho. Reviewed by O.A. Sinitsyn. Stal'
21 no.9:828-829 S '61. (MIRA 14:9)

(Rolling mills--Electric driving)
(Automatic control) (Solodukho, IA.IU.)

ANASTASIYEV, P.I.; BROSTREN, A.A.; VESHENEVSKIY, S.N.; GEL'MAN, G.A.;
GORNSHTEYN, L.A.; ZIMENKOV, M.G.; KARVOVSKIY, G.A.;
KIBLITSKIY, V.A.; KLEYN, P.N.; KLIMIKSEYEV, V.M.; KLYUYEV,
S.A.; KNORRING, G.M.; KORENEVSKIY, A.N.; LEYBZON, Ya.I.;
LIVSHITS, D.S.; LIGERMAN, I.I.; LOGINOV, O.I.; MILICH, M.B.;
NAYFEL'D, M.R.; OKOROKOV, S.P.; POLYAK, A.B.; ROYZEN, S.S.;
RYABOV, M.S.; SINITSYN, O.A.; SOLODUKHO, Ya.Yu.; SOSKIN, E.A.;
STASYUK, V.N.; BOL'SHAM, Ya.M., red.; GRACHEV, V.A., red.;
SAMOVER, M.L., red.; BORICHEV, I. Ye., red.; DANILENKO, A.I.,
red.; KHRAMUSHIN, A.M., red.; YAKUBOVSKIY, F.B., red.; BORUNOV,
N.I., tekhn. red.

[Handbook on electrical systems of industrial enterprises
in four volumes] Sправочник po elektroustanovkam promyshlennych
predpriatii v chetyrekh tomakh. Pod obshchei red. I.E.
Boricheva i dr. Moscow, Gosenergoizdat. Vol.1. [Design of
electrical systems of industrial enterprises in two parts]
Proektirovaniye elektroustanovok promyshlennych predpriatii
v dvukh chastiakh. Pt.2. Pod red. I.A.M.Bol'shama i dr.
1963. 598 p. (MIRA 17:3)

AFANAS'YEV, Vasiliy Danilovich; BORISOV, Yuriy Matveyevich; GUREVICH, Azriyel' Yefimovich; LEVITANSKIY, Boris Aronovich; MAKEYEV, Ivan Fedorovich; STEFANOVICH, Nikolay Nikolayevich; KHALIZEV, Georgiy Petrovich, kand. tekhn. nauk; SINITSYN, O.A., kand. tekhn. nauk, retsenzent; NEMIROVSKIY, M.I., prepodavatel', retsenzent; YAKOVENKO, N.N., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electrical equipment of ferrous metallurgy enterprises] Elektrooborudovanie predpriatiij chernoi metallurgii. [By] V.D. Afanas'yev i dr. Moskva, Metallurgizdat, 1963. 606 p. (MIRA 16:9)

1. Dnepropetrovskiy metallurgicheskiy tekhnikum (for Nemirovskiy).
(Iron and steel plants--Electric equipment)

SINITSYN, P.

Construction of school workshops by students. Politekh. obuch. no.1;
56-58 Ja '58. (MIRA 10:12)
(Workshops) (Technical education)

SINITSYN, P., predsedatel'.

Mobilizing power of the collective agreement. Sov.profsozusy 1 no.3:
71-76 N '53.
(MLRA 6:12)

1. Komitet professional'nogo soveta Kolomenskogo parovozostroitel'nogo
zavoda imeni V.V.Knybyshova.
(Collective labor agreements) (Locomotives)

BUNIN, K.V.; SINITSYN, P.D.

Results of the treatment of hypertension with induced sleep.
Sovet. med. no.10:20-22 Oct 1951. (CIML 21:1)

1. Of the Clinic of Hospital Therapy, Chelyabinsk Medical Institute, attached to the Amalgamated Railroad Hospital YuUZhD.

SINITSYN, P. D., CAND MED SCI, "MATERIAL ON THE PROBLEM
OF THE ACTION MECHANISM AND COMPARATIVE EVALUATION OF SE-
DATIVE THERAPY OF HYPERTONIC DISEASE BY VARIOUS METHODS."
CHELYABINSK, 1961. (SVERDLOVSK STATE MED INST). (KL, 3-61,
235).

462

CA SINITSYN, P. G.

Exchange of Ba^{++} and H^+ ions on perymite. P. G. Sinitsyn (Fizh. Ind. Tsch. Inst., Moscow). Zhur. fiz. khim. 35, 20-4 (1961).—The adsorption of Ba ions is studied on a perymite of the following composition: Na_2O 4.50, Al_2O_3 5.70, Fe_2O_3 1.50, MnO 77.50, SiO_2 12.30%. It takes two months to reach the adsorption equilibrium. Buffered values of pH between 4 and 10 are used. The quantity adsorbed J (milliequiv. Ba/100 g. dry perymite) depends linearly on pH, in agreement with $J = a + b(\text{pH})$ (cf. Lacombe and Bouquer, C.R. 24, 4301), but 2 straight lines are obtained, intersecting at $\text{pH} = 8.5$ and the slope is larger in the alk. than in the acid range. This is due to the adsorption of Ba^{++} on the excess silica gel present in the perymite, as shown by its capacity. This view agrees with the known adsorptive behavior of silica gel at pH above 8 (cf. Berestneva, et al., C.R. 31, 181; Bruns, et al., C.R. 32, 2897).

Michel Bouquer

5(4)

AUTHOR:

Sinitsyn, P. G.

SOV/76-33-3-13/41

TITLE:

Exchange of Barium and Hydrogen Ions on Permutites (Obmen ionov bariya i vodoroda na permutitakh)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3,
pp589 - 592 (USSR)

ABSTRACT:

B. P. Nikol'skiy (Ref 2) pointed out that in the case of adsorption of metal from solutions on permutites and similar materials it is necessary to take also the concentration of the metal cations into account apart from the H⁺-ion concentration. An equation modified by Ye. N. Gapon (Ref 3) should therefore have the following form :

$G_K = \alpha + \beta (\text{pH} - \frac{1}{n} \text{p Me}) \quad (3)$ (α, β = constants, n = valence of the metal cations). In the present paper the applicability of (3) is investigated in connection with the exchange of barium ions on permutites at pH-values of between 5 and 12 and different barium concentrations. The sodium permutite used was prepared according to a certain scheme (Ref 7) and had the following composition: Na₂O - 7.78%, Al₂O₃ - 28.25%,

Card 1/2

Exchange of Barium and Hydrogen Ions on Permutites

SOV/76-33-3-13/41

SiO_2 - 40.77%, H_2O - 24.29%. Two experiments were carried out; in the first case the ionic strength of the solution amounted to $\gamma = 0.1$ and in the second case to $\gamma = 0.5$. The experimental results show (Fig) that equation (3) is satisfactory (at pH 5-12 and barium concentrations of 0.031 and 0.160 mol/l). The observation of a reduced sorption of the metallic ions at higher pH-values may be explained on the one hand by a "competition" between H^+ - ions and barium ions, on the other hand by the fact that at pH = 4 part of the permuted decomposes. The sorption of the Ba-ions as function of pH and the barium concentration varies greatly in Permutites of different composition. There are 1 figure and 10 references, 8 of which are Soviet.

ASSOCIATION: Moskovskiy tekhnicheskiy institut rybnoy promyshlennosti i khozyaystva im. A. I. Mikoyana (Moscow Technical Institute of the Industry and Economy of Fisheries imeni A.I.Mikoyan)

SUBMITTED: June 27, 1957

Card 2/2

1. SINITSYN, V. N.
2. USSR (600)
4. Tillage
7. Progressive agricultural measures in practices, Dost. sel'khoz., No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

SUNFLOWERS, ... H.

Sunflowers

Check-rowing sunflowers in the area of the Khvalynsk Oil Factory. Nasl. -zhir. prom.
18, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

SINITSYN, P.N., agronom.

Harvest and procurement of sunflower seeds. Masl.-zhir.prom. 18 no.7:8-9
Jl '53. (MLR 6:8)

1. Khvalynskiy maslogavod.

(Sunflowers)

SINITSYN, P.N.

P.N. Sinitsyn, Vysokiyе urozhai serven lyutserny / High Yields of Alfalfa Seed/.
Sel'khozgiz, 2 sheets.

The brochure discusses the organization of the work and the advanced management
of growing alfalfa for seed.

SO: U-6472, 15 Nov 1954

SINITSYN, P.N., agronom.

State purchase of sunflowers. Masl.-zhir.prom. 19 no.3:6-7 '54.
(MLRA 7:6)

1. Khvalynskiy maslozavod. (Sunflowers)

SINITSYN, P.N., agronom.

Several problems relative to the economics of sunflower production.
Masl.-zhir. prom. 23 no.2 '57. (MIRA 10:4)

1. Khvalynskiy maslozavod.
(Sunflowers)

LESOKHIN, Artemiy Fedorovich; SINITSYN, P.P., retsenzent; KOROTKOV, V.P.,
kandidat tekhnicheskikh nauk, redaktor; MODEL', B.I., tekhnicheskiy
redaktor

[Tolerances, fits and technical measurements] Dopuski, posadki i te-
khnicheskie izmereniiia. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroit. lit-ry, 1956. 339 p.
(MLR 10:4)
(Machine-shop practice)

25(1)

PHASE I BOOK EXPLOITATION

Sinitsyn, Pavel Prokof'yevich

SOV/2343

Osnovy vzaimozamenyayemosti i tekhnicheskikh izmereniy (Fundamentals of Interchangeability and Technical Measurements) Moscow, Oborongiz, 1959. 246 p.
Errata slip inserted. Number of copies printed not given.

Reviewer: A.Ye. Bezmenov, Candidate of Technical Sciences, Docent; Ed.: I. A. Grigor'yev, Candidate of Technical Sciences; Ed. of Publishing House: L. I. Sheynfayn; Tech. Ed.: V.P. Rozhin; Managing Ed.: A. I. Sokolov, Engineer.

PURPOSE: This is a textbook for students in machine-building vuzes.

COVERAGE: The book covers fundamental problems of interchangeability in machine-building production. Tolerances and fits in smooth cylindrical joints, tolerances in threaded and splined joints, and tolerances in dimensional chains and in spur gearing are discussed. The author presents methods of measuring lengths, angles, cones and elements of spur gears. Numerical examples of calculations are provided. The author thanks A.Ye. Bezmenov for reviewing the manuscript and offering suggestions. There are 10 references, all Soviet.

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AVAILABLE: : Library of Congress

GO/fal
10-19-59

Card 7/7

SINITSYN, P.V., inzhener.

Simplified calculation of the distance to the point of damaged
insulation of electric cables. Vest.sviazi 16 no.5:12 My '56.
(MLRA 9:8)

1. Rukovoditel' izmeritel'noy gruppy rayona kobel'noy magistrali.
(Electric cables)

SINITSYN, P.V.

Some characteristics of measuring difference of potential between
cable coverings and the ground. Vest. sviazi 17 no.12:19-20 D '57.
(MIRA 10:12)

1. Nachal'nik izmeritel'noy gruppy KDM-1 UDM-4.
(Electric cables)

SINITSYN, P.V.

Measurement of the ground temperature around underground cables.
Vest. sviazi 19 no.11:26 N '59. (MIRA 13:8)

1. Rukovoditel' izmeritel'noy gruppy REM.
(Electric lines--Underground)
(Temperature--Measurement)

SINITSYN, P.V., inzh.

Increase the quality of cable laying operations. Avtom., telem.
i sviaz' 4 no. 12:31 D '60. (MIRA 14:1)

1. Laboratoriya signalizatsii i svyazi Kalininskoy dorogi.
(Electric lines--Underground)

SINITSYN, P.V. (Smolensk)

Sealing cable ends. Stroi.truboprov. 10 no.10:23-24 0 '65.
(MIRA 18:10)

I. 10684-63

BWT(n)/BDS/ES(w)-2--AFFTC/ASN/ESD-3/SSD-Pab-4

ACCESSION NR: AP3002276 8/0089/63/014/006/0596/0597

AUTHOR: Nikeshichev, V. N.; Sinitsyn, P. V.

75

TITLE: Colloquium on construction and application of betatrons,⁹ held in Bucharest, Roumania, November 1962

74

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 596-597

TOPIC TAGS: clinical use of betatrons, conferences

ABSTRACT: Report on colloquium held in Bucharest in November 1962 on the initiative of the Roumanian Academy of Sciences. Thirty scientists from East Germany, Roumania, Soviet Union, Poland, Hungary, and Yugoslavia participated. Papers from the first three countries were the most interesting as these countries had greater experience in construction and operation of these accelerators. Academician Kh. Khulubi of the AN RPR opened the colloquium. Papers were presented by Prof. A. A. Vorob'yev (SSSR) on work done in the Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute); Prof. A. Eckart (East Germany) of the Physico-Technical Institute of Jena University; M. Vaksel', A. Brinshek of Lubliana, Institute for nuclear physics (Yugoslavia); K. Iliescu and others of the Betatron laboratory, Institute for atomic physics AN RPR; R. V. Sinitsyn and V. N. Nikeshichev (SSSR); E. Burger and V. Stern (East Germany). Among application

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L 10684-63
ACCESSION NR: AP3002276

discussed was the use of betatrons in clinical treatment of malignant growths. It was pointed out that the betatrons produced by the Moscow Elektrozavod are not inferior to those constructed by research institutes or commercial firms.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 12Jul63

ENCL: 00

SUB CODE: 00

NO REF Sov: 000

OTHER: 000

Ja/Sen
Card 2/2

SINITSYN, R.

The shoe store. Sov. torg 33 no.10:49-54 0 '59. (MIRA 13:1)

1. Direktor Doma obuvi, -Moskva.
(Moscow--Stores, Retail)
(Boots and shoes)

SINITSYN, R.

Let's supply the stores with modern equipment. Sov.torg. 35
no.4:14=15 Ap '62. (MIRA 15:4)

1. Direktor moskovskogo Doma obuvi.
(Store fixtures)

SINITSYN, R.G. (Odessa)

Frequency of paradentosis and gingivitis in older school children.
Probl.stom. 6:86-91 '62. (MIRA 16:3)
(GUMS—DISEASES) (CHILDREN—DISEASES)

SINITSYN, R.G.; PILIPENKO, L.I.

Caries infection of temporary (milk) teeth. Stomatologiya 42
no.3:10-14 My-Je'63 (MIRA 17:1)

1. Iz detskogo otdela Odesskogo nauchno-issledovatel'skogo
instituta stomatologii (dir. - dotsent A.I. Marchenko). Nauch-
nyy rukovoditel' raboty - prof. I.A. Begel'man.

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Solubility of the enamel of milk teeth and permanent teeth.
Stomatologija 42 no.4:11-15 Jl-Ag'63 (MIRA 17:4)

1. Iz detskogo otdela, otdela plastmass i materialovedeniya
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TITLE: Determination of the Relative Intensities and Conversion Coefficients of Transitions Produced During the Decay of Se⁷⁵
(Opredeleniye otnositel'nykh intensivnostey i koeffitsiyentov konversii perekhodov, voznikayushchikh pri raspade Se⁷⁵)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 2, pp 159-184 (USSR)

ABSTRACT: At the beginning, the authors report on data obtained up to now on the Ge⁷⁵ → As⁷⁵ ← Se⁷⁵ decay, and the spectrometers, sources and conditions of measurement of the investigations explained in this paper are described as follows: the magnetic spectrometer used for measurement had a double focusing, and the half width of electron lines in the spectrometer conditioned by the apparatus amounted to 0.4%. The conversion spectrum was measured in the presence of radiation sources of different thickness: 0.05, 0.25, 5 mg/cm². For the purpose of determining the spectral lines of photoelectrons thin targets of silver, lead, bismuth and other elements were used. The determinations covered 1) the relative intensities I_y of the spectral lines

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Transitions Produced During the Decay of Se⁷⁵

of photoelectrons of Se⁷⁵; the authors recorded the whole spectrum with Bi-target $\sigma = 0.1 \text{ mg/cm}^2$, the energy range up to ~ 100 kev with Ag-targets $\sigma = 0.25-0.03 \text{ mg/cm}^2$, the range up to 401 kev inclusive with As-target, $\sigma = 0.25 \text{ mg/cm}^2$, the line 572 kev with particularly thick Ta, Pb, and Bi-targets up to $\sigma = 80 \text{ mg/cm}^2$ (Figs 2-6). The energies obtained and the corresponding I_γ are listed in table 1. The intensity of the transition $h\nu = 265$ kev was assumed as a reference quantity equal to 100. For comparison, tables 1 and 2 contain also data obtained by other authors. For the purpose of checking the spectral sensitivity of the apparatus the relative intensities of γ -lines of Sb¹²⁴ were compared with the values mentioned in paper (Ref 47), in which investigations were carried out by means of the calibrated standard γ -spectrometer "Elotron" (Tables 4, 5 and table 6 give a comparison with Tb¹⁶⁰). A possible error in the determination of $I_\gamma \leq 15\%$ results from the comparisons. 2) The authors measured the electron spins of internal conversions of Se⁷⁵. They obtained 26 conversion lines produced by 12 transitions in As⁷⁵ (Figs 7-12),

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among which there are also the lines of Auger electrons K-LL,
K-LM, K-MM. Their energies, intensities I_{γ} , and origin are
listed in table 7. According to a comparison with data obtained
by other authors the best accordance was found with Schardt
and Welker (Ref 10). For the purpose of determining the con-
version coefficients from I_{γ} and I_K two methods were applied:

a) from a comparison of the experimental values I_K/I_{γ} with
the conversion coefficients of transitions 265, 280, 305,
401 kev according to Bashilov and Il'in (Ref 45)(Table 8);
the mean value $\alpha_K/(I_K/I_{\gamma})$ was used for determining the con-
version coefficients of the other transitions; b) from the
E1 transition of the transitions 121, 235, 401 kev the con-
version coefficients of the other transitions were determined
in the above-mentioned way. The values obtained in both ways
agree well with one another. On the basis of a comparison
between the theoretical and experimental values α_K the authors
determined the multipole order of all transitions obtained
(Table 9). According to the analysis of the scheme of As⁷⁵ de-
cay by means of Coulomb excitation and inelastic neutron

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Transitions Produced During the Decay of Se^{75}

scattering the authors determined the existence of the excitation states $\sim 200, 281, 574, 780, 814, 1020, 1250, 1633$ kev. The spectrum of Ge^{75} was studied by the method of β^- - γ -coincidence and the levels 199, 265, 477, 628 kev were obtained (Table 10). The γ -spectrum and γ - γ -coincidence from papers (Refs 10 and 25) are given in table 11. Furthermore, the quantum characteristics of the ground state As^{75} , Se^{75} , Ge^{75} were determined to be $3/2^-, 5/2^-, 1/2^-$. The quantum characteristics of the levels 265, 280 and 401 kev were determined as well. The intensity equilibrium in the Se^{75} decay is mentioned in tables 13, 14. The quantities Ig Tf are in accordance with selection rules. According to these results the scheme of the $\text{Ge}^{75} \rightarrow \text{As}^{75} \leftarrow \text{Se}^{75}$ decay is established (Fig 13). Similarities of parity with neighboring nuclei are contained in table 15. On the basis of the one-particle model the authors give two possible explanations of the ground state of the nuclei $^{34}\text{Se}^{75}$ and $^{33}\text{As}^{75}$ as well as of the levels of As^{75} at 199, 256, 280, 305 and 401 kev in table 17. There are 13 figures, 17 tables, and 55 references, 19 of which are Soviet.

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Determination of the Relative Intensities and Conversion Coefficients of
Transitions Produced During the Decay of Se⁷⁵

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L. laboratoriya meditsinskikh istochnikov ioniziruyushchikh izucheniy i klinicheskoy dozimetrii TSentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR, Leningrad,

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